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Invention

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B32B5/16

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[54] Name: Manufacturing Method for Reflective Cloth (Paper) Substrate

[21] Application File No.: 088100552

[22] Date of Application: January 15, Republic of China, Year 88 (1999).

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[54] Patent Claims

1. Manufacturing method for a reflective cloth (paper) substrate. The method primarily consists of coating a uniform layer of pressure sensitive adhesive on the surface of a plastic thin film, followed by uniform planting (coating) of pre-manufactured reflective microspheres on the plastic thin film, using an electro-static process. A thin metallic layer is then applied to form the reflective cloth (paper) substrate. The substrate is supplied to customers for further processing. Based on the final product requirement, the substrate is being glued and attached to an article. The plastic film is then removed, obtaining an article with excellent reflective property.
2. As the manufacturing method of the reflective cloth (paper) substrate mentioned in Claim 1, in which, the step the thin metal layer is applied, is through vacuum deposition, or by direct uniform coating of a layer of aluminum paste (commonly referred to as silver paste).
3. As the manufacturing method of the reflective cloth (paper) substrate mentioned in Claim 1, in which, if the reflective cloth (paper) substrate must be prepared in many colors, such as red, orange, yellow, green, blue, indigo, or purple, etc., it can be accomplished by coating a uniform layer of pressure sensitive adhesive on the surface of a plastic thin film, followed by uniform planting (coating) of pre-manufactured reflective microspheres on the plastic thin film, using an electro-static or any other process. A resin layer with pre-selected color is then uniformly applied to obtained the colored reflective cloth (paper) substrate.

Brief Explanation of Figures:

Figure 1 is a manufacturing flow diagram (chart) of this invention.

Figure 2 is an operation flow diagram (chart) of the manufacturing machinery of this invention.

Figure 3 is a brief sketch of the structure of the reflective cloth (paper) substrate of this invention.

Figure 4 is a sketch showing the attachment of the substrate to a desired article and the separation of the plastic thin film.

Coating of Pressure Sensitive Adhesive  
on a Plastic Thin Film

Electro-Static Coating (Planting) of  
Reflective Microspheres

Application of a Metallic Thin Film

Completed  
Reflective Substrate

Figure 1. Manufacturing Flow Diagram

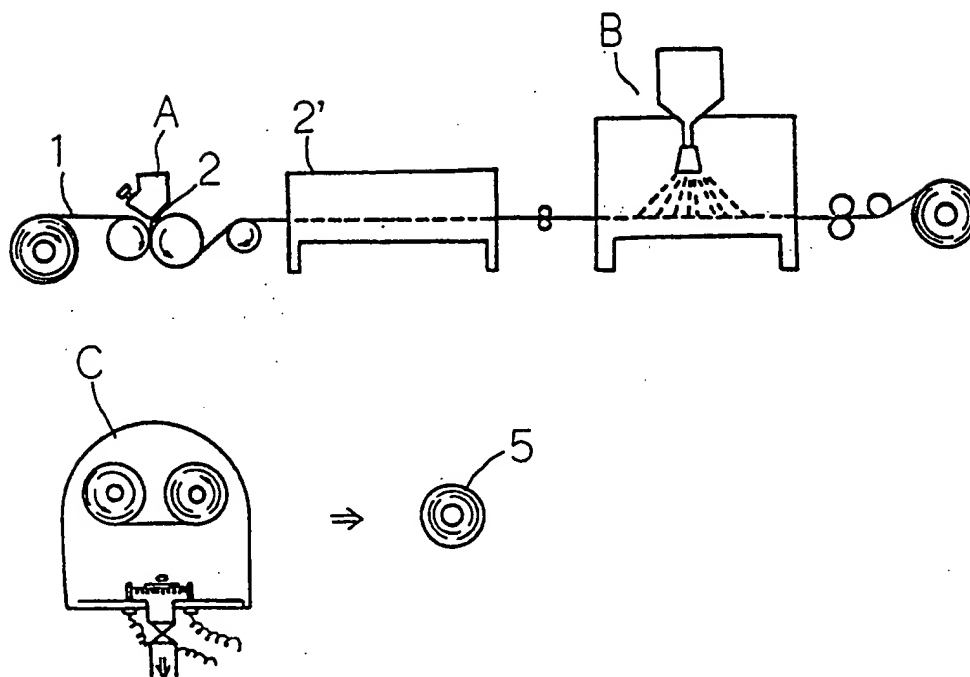


Figure 2. Operation Flow Diagram of the Manufacturing Machinery

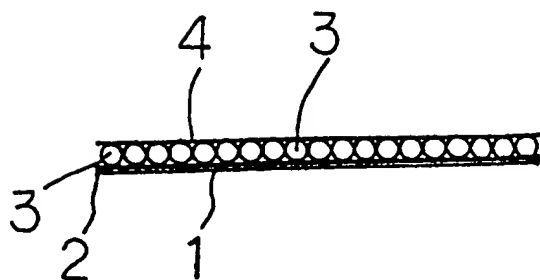


Figure 3. Structure of the Reflective Cloth (Paper) Substrate

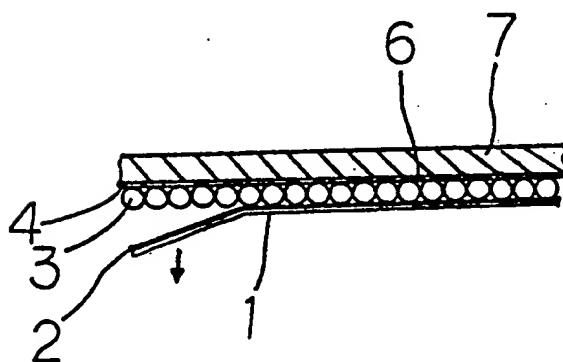


Figure 4. The Attachment of the Substrate to a Desired Article and the Separation of the Plastic Thin Film

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發明

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[54]名稱：反光布(紙)基材之製造方法

[21]申請案號：088100552

[22]申請日期：中華民國 88年(1999) 01月15日

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[57]申請專利範圍：

- 1.一種反光布(紙)基材之製造方法，主要係在塑膠薄膜表面上均勻塗佈一層感壓性黏膠，接續以靜電方式將預先製得之反光微粒珠子均勻植(塗)佈於塑膠薄膜上，然後再加工上一層金屬薄層，即完成一種反光布(紙)基材，進而藉基材提供給下游廠商視所需製作物品再進行基材與物品進行上膠貼合動作，最後再把塑膠薄膜撕下即成，可獲得反光效果更佳之製成物。
- 2.如申請專利範圍第1項所述之反光布(紙)基材之製造方法，其中，該加工上一層金屬薄層步驟，係可由真空電鍍法或直接均勻塗佈一層鋁漿(俗稱銀漿)製得。
- 3.如申請專利範圍第1項所述之反光布(紙)基材之製造方法，其中，該反光布

(紙)基材需製成多種色系，如紅、橙、黃、綠、藍、靛、紫等等顏色時，即可依將塑膠薄膜表面上均勻塗佈感壓性自黏膠，接續以靜電法或其它方式，將預先製得之反光微粒珠子均勻植佈於塑膠薄膜上，然後再均勻塗佈一層預定顏色之樹脂層，即可製得有顏色之反光布(紙)基材。

圖式簡單說明：

10. 第一圖：係本發明之製作流程圖。
- 第二圖：係本發明製造機具作業流程簡要圖。
- 第三圖：係本發明反光布(紙)基材結構簡略圖。
15. 第四圖：係本發明基材與所需物品進行貼合與塑膠薄膜分離示意圖。

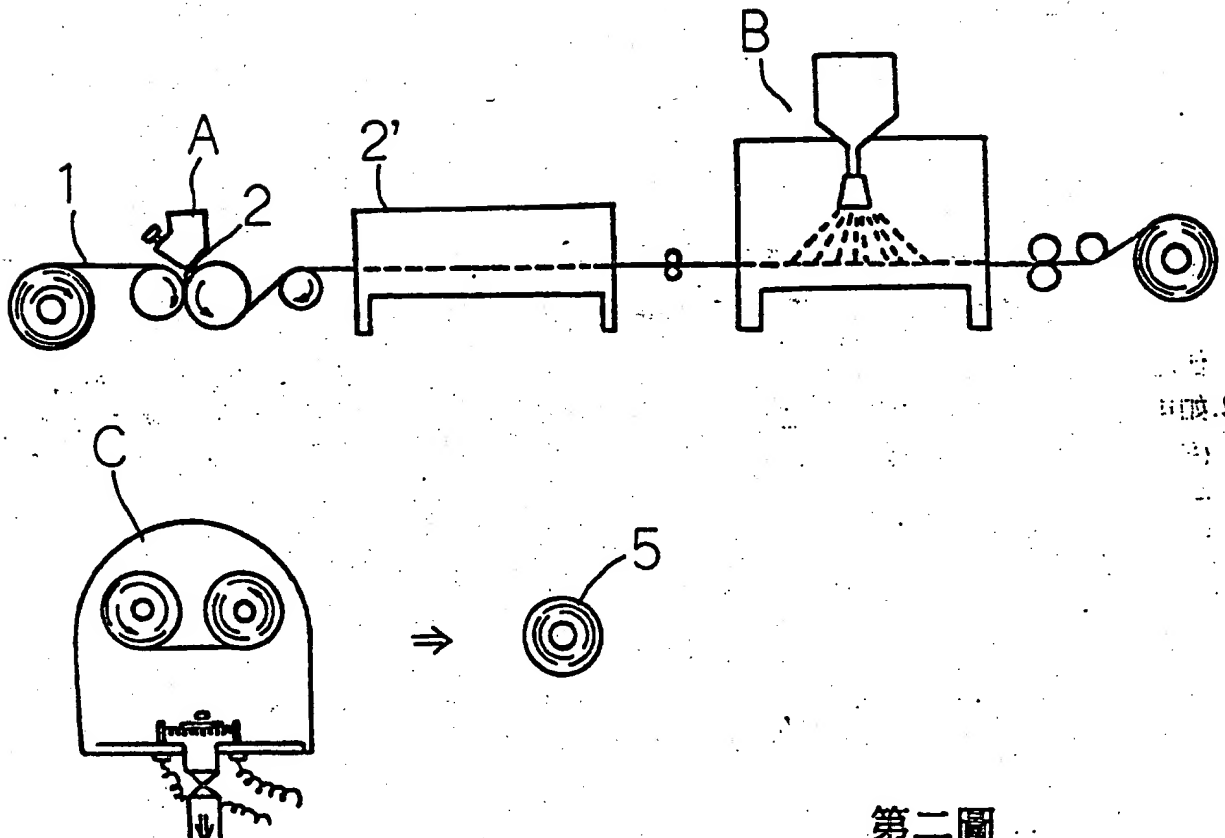
塑膠薄膜塗佈感壓性黏膠

靜電塗(植)佈反光微粒珠子

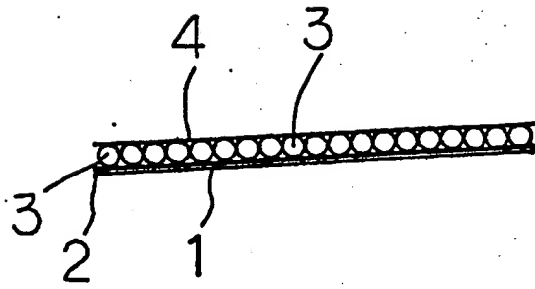
加工上一層金屬薄層

第一圖

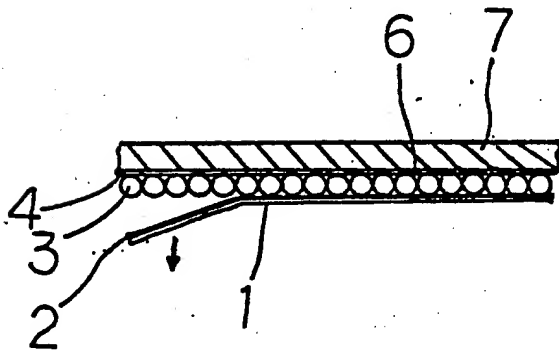
完成反光基材



第二圖



第三圖



第四圖